

Better Site Design in James City County:

Report and Findings from the Better Site Design
Implementation Committee

September 2007

Executive Summary

The James City County Local Site Planning Roundtable was established to review existing development codes and identify regulatory barriers to environmentally sensitive residential and commercial development at the site level. The Roundtable recommendations include suggested general and specific code and ordinance revisions that will increase flexibility for site design standards and promote the use of open space and flexible design development in James City County (County). The objectives of Better Site Design (BSD) are to:

1. reduce overall site impervious cover;
2. preserve and enhance existing natural areas;
3. integrate stormwater management; and
4. retain a marketable product.

According to the Roundtable recommendations, the Committee has identified specific County ordinances, codes, policies, and/or program areas that should be modified, will remove regulatory hurdles, and provide the incentives, flexibility, and guidance requested in the Roundtable consensus document such that developers can implement BSD on their projects.

The following table summarizes the 24 principles and the Committee's proposed implementation recommendation. The Committee proposes to bring recommended ordinance revisions to the Planning Commission and Board of Supervisors for action by both bodies. Some recommendations include refinement to existing County educational programs, some recommendations are additions or clarifications to existing County policy and manuals, and others are ordinance revisions that require legislative action. The purpose of this document is to summarize the findings of the Committee in preparation for a BSD work session between Committee representatives, the Planning Commission (PC), and the Board of Supervisors (BOS). The document can then be used to guide recommended actions. Once revisions to County programs, manuals, or ordinances are complete, the final products will be brought back before the BOS.

Introduction

This is the final installment of the James City County Local Site Planning Roundtable, a consensus building process by the Builders for the Bay, including the Center for Watershed Protection, the Alliance for the Chesapeake Bay, the Peninsula Housing and Builders Association, and James City County. A document developed through the roundtable process, *Recommended Model Development Principles for James City County, Virginia*, included suggested general and specific policy and ordinance revisions to increase the flexibility for site design standards while promoting the use of open space and flexible design development in James City County. Implementation and application of these Better Site Design (BSD) principles will remove regulatory hurdles and provide incentives, flexibility, and guidance for developers such that development within James City County meets four critical BSD objectives: (1) reduction of overall site impervious cover, (2) preserve and enhance existing natural areas, (3) integrate stormwater management, and (4) retain a marketable product. Some of the BSD principles also address natural open space maintenance issues and provide guidance for homeowners within the County.

The task of the Better Site Design Implementation Committee (Committee) was to either implement or develop an implementation schedule for the recommendations put forth in the Roundtable consensus document. The Committee is comprised of members of the Peninsula Housing and Builders Association, Planning Division staff, Environmental Division staff, and a Planning Commissioner. The Chairman would like to thank the following people for their help in achieving our goals: Mr. Robert Duckett, Mr. Mark Rinaldi, Mr. Tim Cleary, Mr. Robert Cosby, Mr. Sean Fisher, Mr. Joel Almquist, Mr. Bradley Weidenhammer, Mr. Khoi Nguyen, Ms. Beth Davis, Ms. Sarah Kadec, Ms. Ellen Cook, Mr. Jose Riberio, Ms. Leanne Reidenbach, Ms. Terry Costello, Ms. Alexis Maxwell, Ms. Gwen Kennedy, Ms. Shereen Hughes, Mr. Scott Thomas, Mr. Don Davis, Mr. Allen Murphy, and Mr. John Horne.

Roundtable Principle #			Roundtable Recommendation	Responsible Party	Recommended Action	Appendix
1	Street Width	1	Virginia Department of Transportation (VDOT) should accept staff recommendations and not require BOS action	Planning Commission Policy Committee (Policy Committee)	To Be Determined (TBD) pending further discussion with VDOT	—
		2	VDOT should reduce permissible street widths from 26 to 24 feet	Policy Committee	TBD pending further discussion with VDOT	—
2	Street Length	1	Continue to encourage alternative street designs to reduce overall imperviousness	Planning and Environmental staff, PRIDE	Better Site Design Guidance document - Pending -	—
3	Rights-of-Way (ROW)	1	Adopt a “joint trench initiative” requiring telephone, electric and cable to use same trench	Peninsula Housing and Builders Association (PHBA), Environmental and/or JCSA staff	Legislative or policy	I. PHBA letter, Virginia Department of Conservation and Recreation (DCR) response
		2	Require utility easements to be shown on preliminary plats	None	None	—
		3	Design, location and construction requirements for water/sanitary sewer utilities to be constructed within pavement section	Planning and JCSA staff, VDOT	Legislative or policy	—
		4	Reduce ROW according to Principle #1b	Policy Committee	TBD	—
4	Cul-de-Sacs	1	County standards are in accordance with national benchmarks	Plan review staff	None	—
5	Vegetated Open Channels	1	Implementation is allowable by ordinances and regulations	Environmental staff	Low Impact Development (LID) section in Stormwater Best Management Practices (BMP) Manual - Pending -	—
6	Parking Ratios	1	Provide additional information why minimum parking requirements are	Plan review staff	None	II. Site plan checklist

Roundtable Principle #			Roundtable Recommendation	Responsible Party	Recommended Action	Appendix
			exceeded			
		2	Encourage pervious surfaces for additional parking beyond minimums	Plan review staff	Porous Pavement Brochure	III. Porous Pavement Brochure
7	Parking Codes	1	Model shared parking agreement	Planning staff	Model Shared Parking Agreement - Complete -	IV. Shared Parking Agreement
8	Parking Lot Size	1	Meet Americans with Disabilities Act (ADA) requirements for handicapped stalls	Planning staff	Legislative	V. Memo and Ordinance
9	Green Development Certification	1	Create an award for development/engineering community for using BSD in projects	Protecting Resources in Delicate Environments (PRIDE) program	Award program	—
10	Open Space Development	1	Support open space development	Staff	None	—
		2	Open space development by-right in R-1 as base density	Policy Committee	Legislative (Ordinance revisions)	VI., VII., VIII. Committee Recommendation Documents
		3(1)	PC and BOS to consider if Special Use Permit (SUP) process creates a barrier for R-1 and R-2 open space development above base density	PC and BOS	TBD	—
		3(2)	PC and BOS to consider if SUP process provides adequate environmental protection incentives	PC and BOS	TBD	—
11	Setbacks	1	Reduce front setback for R-1 and R-2 to 25 feet for conventional development	Planning staff	Legislative	IX. Memo and Ordinance
12	Sidewalks	1	Eliminate mandatory requirements for sidewalks on all streets for low and medium density developments	None	None	—
		2	Slope sidewalks to pervious surfaces	Environmental staff	LID section in BMP Manual	—

Roundtable Principle #			Roundtable Recommendation	Responsible Party	Recommended Action	Appendix
					- pending -	
		3	Use alternative pavement materials and promote LID	Environmental staff	LID Section in BMP Manual - pending -	—
13	Driveways and Alternative Surfaces	1	Shared driveways and alternative driveway surfaces	Environmental staff, PRIDE	Award Program; LID section in BMP Manual - pending -	—
13		2	Maintenance agreements required to be resigned/reactivated at time of sale	Planning staff	Model Shared Driveway Agreement - complete -	X. Model Shared Driveway Agreement
14	Open Space Management	1	Annual re-education opportunities for managing and sustaining water quality improvement practices	PRIDE program	Continue existing program, Homeowner BSD Brochure	XI. Homeowner BSD Brochure
		2	Homeowners Association (HOA) guidance for management of conservation areas should be more explicit	PRIDE program	Guidance Document, Homeowner BSD Brochure	XI. Homeowner BSD Brochure
		3	Portion of open space in new developments should be managed in a natural condition	Planning and Environmental staff, PRIDE program	Guidance Document, Homeowner BSD Brochure, ordinance revisions	XI. Homeowner BSD Brochure
15	On-Site Sewage Disposal Systems	1	Continue enforcing Chesapeake Bay Preservation Ordinance	Environmental staff	Continue existing program	—
		2	Use of alternative septic systems	Planning and Environmental staff	TBD	—
		3	Routine maintenance if alternative septic systems are used	Environmental staff	Guidance Document - pending -	—
16	Infill and Redevelopment	1	Environmentally sound landscaping, building and redevelopment techniques to be encouraged	Plan review staff	None	—
		2	Land development and infill projects to minimize land disturbance and impervious cover	Plan review staff	None	—

Roundtable Principle #			Roundtable Recommendation	Responsible Party	Recommended Action	Appendix
17	Buffer Systems	1	Homeowner brochure of native plants	PRIDE program	Homeowner BSD Brochure	XI. Homeowner BSD Brochure
		2	Native plant posters at nurseries and garden centers	PRIDE program	Continue existing program	—
		3	Educate employees of nurseries and garden centers	PRIDE program	Continue existing program	—
17		4	Big box education	PRIDE program	Continue existing program	—
		5	Native plant society as source of native plants	PRIDE program	Continue existing program	—
		6	Expand educational opportunities for County residents	PRIDE program	Continue existing program	—
		7	Native plant information in HOA newsletters	PRIDE program	Continue existing program	—
		8	Protection of intermittent streams	Environmental staff	BMP Manual update, legislative (TBD)	—
		9	HOAs as avenue to educate homeowners on intermittent streams	PRIDE program	Homeowner BSD Brochure	XI. Homeowner BSD Brochure
18	Buffer Maintenance	1	Revise approved native plant list	Environmental staff	Homeowner BSD Brochure	XI. Homeowner BSD Brochure
		2	Educate homeowners on stream buffers and regulations	PRIDE program	Homeowner BSD Brochure	XI. Homeowner BSD Brochure
19	Clearing and Grading	1	Erosion and sediment control of public utility project authority to be granted to the County	PHBA, Environmental staff	TBD	XII. PHBA letter, DCR response
20	Tree Conservation	1	Continue conceptual plan review roundtable process	Plan review staff	Continue existing program	—
21	Conservation Incentives	1	Expand open space options in County BMP manual	Environmental staff	BMP Manual update	—

Roundtable Principle #			Roundtable Recommendation	Responsible Party	Recommended Action	Appendix
		2	PC should examine possible incentives and a means of flexibility for conservation incentives and make recommendations to the BOS	Policy Committee, PC, BOS, Planning and Environmental staff	TBD, BMP Manual update	—
22	Stormwater Management	1	Continue current course	Environmental staff	Continue existing program	—
23	Parking Lot Runoff	1	Formal program that defines acceptable LID practices	Environmental staff	LID section in BMP Manual - pending -	—
		2	Encourage the use of pervious surfaces in overflow parking	Plan review staff	Continue existing program, Porous Pavement brochure	III. Porous Pavement Brochure
24	Rooftop Runoff	1	Extra stormwater credit for careful management of roof top runoff	Environmental staff	BMP Manual revision - pending -	—
		2	Stormwater credit for the reuse of stormwater runoff for irrigation	Environmental staff	BMP Manual revision - pending -	—

Recommended Model Development Principles for James City County, Virginia, Better Site Design (BSD) principles and the associated recommendation(s) from the document are provided for clarification purposes and are listed in order, in bold, underlined, italicized text. Discussion the Committee had on each principle and the implementation recommendations are summarized by principle. The Appendix section provides additional information, such as brochures or suggested ordinance revisions.

Principle 1 – Street Width - Roundtable

Design residential streets for the minimum required pavement width needed to support travel lanes; on-street parking; and emergency, maintenance, and service vehicle access. These widths should be based on traffic volume.

First Recommendation - Roundtable

When concurrence of local JCC officials is required to reduce street width below the base VDOT design standards, VDOT should accept JCC staff recommendations and not require JCC Board of Supervisors action. This will help to streamline the process and reduce time required to get approval for street width reduction.

Second Recommendation - Roundtable

VDOT should reduce the permissible street width from 26 to 24 feet.

Discussion:

For streets carrying up to 400 vehicles per day (vpd), the minimum street width required by VDOT is 28 feet. However, the street width could be reduced from 28 to 26 feet for streets carrying up to 400 vpd. The review process for this street width reduction request can be performed administratively on a case-by-case basis with the concurrence of local officials (e.g. James City County's Planning Director) and with the support of VDOT. Reductions beyond that, for instance, 24 feet for streets carrying up to 400 vpd, may be approved with support from the local governing body (e.g. James City County's Board of Supervisors). The process for the administrative and legislative review referenced above could be waived if Countywide street reduction design standards for certain types of subdivision development were established (e.g. Neo-traditional subdivision). In addition, VDOT notes that Virginia's General Assembly just passed a bill requiring VDOT to update its street acceptance requirements, with one of the items to focus on being "provisions to minimize stormwater runoff and impervious surface area," which means that VDOT will probably be reducing the street widths again some time soon

Recommendation:

To achieve the first and second recommendations of the Roundtable, this Committee recommends that the Policy Committee study the issue of further street width reductions. Specifically, the Policy Committee should determine which County agency is responsible for developing the specific guidelines for street width reduction, if the current street width reduction policy guidelines are still acceptable to VDOT, and whether or not the County should develop street reduction design standards for specific types of subdivision developments such as Neo-Traditional.

Principle 2 – Street Length - Roundtable

Reduce total length of residential streets by examining alternative street layouts to determine the best option for increasing the number of homes per unit length.

First Recommendation - Roundtable

The Roundtable supports this principle and recommends that the County continue to encourage the use of alternative street designs to reduce the overall imperviousness of the development site.

Discussion:

The Committee agrees with the Roundtable recommendation. Staff will continue to encourage alternative street designs to help reduce overall development site imperviousness at all opportunities. The Committee also wanted to see some consistency in the process and suggested a checklist be developed to help provide some clarity and guidance to the development community.

Recommendation:

To achieve quality, alternative street designs, this Committee recommends that staff, in cooperation with PRIDE personnel, develop guidance, such as a Better Site Design (BSD) checklist, that includes alternative street design considerations. Furthermore, this Committee fully supports this Roundtable recommendation and supports staff in their endeavor to encourage alternative street designs at all opportunities.

Principle 3 – Rights-of-Way, First Recommendation - Roundtable

Wherever possible, residential street right-of-way widths should reflect the minimum required to accommodate the travel-way, sidewalk, and vegetated open channels. Utilities should be located within the pavement section of the right-of-way (ROW) whenever feasible.

First Recommendation - Roundtable

JCC should adopt a policy that telephone, cable, and electrical utilities are to utilize the “Joint Trench Initiative” in order to reduce disturbance.

Discussion:

Mr. Robert Duckett of the Peninsula Housing and Builders Association (PHBA) is continuing his discussions with the various utility companies to get them to agree to utilize a joint trench initiative.

Recommendation:

The Committee fully supports the PHBA in this endeavor, and recommends that staff continue to monitor the progress of this PHBA endeavor.

Second Recommendation - Roundtable

JCC should require utility easements to be shown on preliminary plats.

Discussion:

The types of utilities typically installed in a subdivision include the ‘major’ utilities (stormwater, sanitary sewer, and water) and the ‘minor’ utilities (power, cable, gas, and telephone). The installation of major and minor utilities usually occurs at different stages in the development process. The major utilities are installed with the major infrastructure. Whereas, the minor utilities usually are installed after the major infrastructure is in place but prior to a granting of Certificates of Occupancy.

Separate easements are required for the major utilities and the easements are shown on preliminary plats when submitted for staff review. Separate easements typically are not required for the minor utilities. These utilities are usually placed within the road right-of-way. The location of these minor utilities is often unavailable at the time of plan preparation and preliminary plat submission.

Recommendation:

Due to the inherent difficulty in planning for all of the separate utilities, this Committee cannot support the statement that JCC should **require** that all utility easements be shown on the preliminary plat. However, the Committee supports staff in their efforts to encourage that all utility easements be shown on the preliminary plat when the locations are known.

Third Recommendation - Roundtable

James City County and the James City Service Authority should work with VDOT to develop adequate requirements for design, location, and construction of water and sanitary sewer utilities to be constructed within the pavement limits. Such provisions shall include requirements that will ensure that adequate testing and inspection is performed to minimize future settlement.

Discussion:

Since the Roundtable process was completed, staff has received an update from VDOT. VDOT has indicated that the Williamsburg Residency does allow water and sewer utilities to be constructed within the pavement limits. VDOT currently reviews construction plans and requests that testing and inspection-related notes be placed on plan sets. VDOT staff did indicate that even though this is the case, they would like to work further with the County on formalizing the requirements for testing and inspection provisions.

Recommendation:

The Committee recommends that County staff work with VDOT to formalize the requirements for testing and inspection provisions.

Fourth Recommendation - Roundtable

Reduce ROW width according to Table 1 Principle #1 Street Width.

Discussion:

As discussed above in Principle 1, the allowable street width for streets carrying up to 400 vpd is 28 feet. The corresponding right-of-way width for a 28-foot wide road section is 40 feet. A reduction in right-of-way may be allowed with specific approval of the locality and the resident engineer.

Recommendation:

The minimum right-of-way recommended by VDOT should be 40 feet or the width necessary to accommodate all road elements. To address the issue of further street width and right-of-way reduction, this Committee recommends that the Planning Commission's Policy Committee study the issue of further rights-of-way reductions in conjunction with street width reductions as previously discussed in Principle 1.

Principle 4 – Cul-de-Sacs - Roundtable

The radius of cul-de-sacs should be the minimum required to accommodate emergency and maintenance vehicles in order to reduce the amount of impervious cover. Landscaped cul-de-sac islands that reduce impervious cover and/or enhance stormwater management should be encouraged.

First Recommendation - Roundtable

The Roundtable endorses this principle and acknowledges that the County's minimal cul-de-sac radii are in accordance with the national benchmark for cul-de-sac radii.

Discussion:

Discussions on this principle revolved around retrofitting existing cul-de-sacs that were designed to a different standard and are extremely large for

the intended purpose. While this is an area that staff is aware of, there are no mechanisms in place to require retrofitting.

Recommendation:

The Committee agrees with the Roundtable and no action is required. In addition, the Committee agrees with the statement “Landscaped cul-de-sac islands that reduce impervious cover and/or enhance stormwater management should be encouraged” and suggests that staff be directed to encourage the use of such landscaped cul-de-sac islands when feasible and appropriate.

Principle 5 – Vegetated Open Channels - Roundtable

Where density, topography, soils and slope permit, vegetated open channels should be considered as an option for conveying and treating stormwater runoff.

First Recommendation - Roundtable

The Roundtable supports this principle and acknowledges that there are no impediments to its implementation in James City County ordinances and regulations.

Discussion:

Committee discussions centered on vegetated open channel characteristics and the associated stormwater quality benefits derived from the vegetated open channels.

Recommendation:

The Committee recommends that the Environmental Division develop a Low Impact Development Manual for inclusion by reference in the *James City County Guidelines for Design and Construction of Stormwater Management BMP's* with guidelines for design, installation, and maintenance of vegetated open channels.

Principle 6 – Parking Ratios – Roundtable

Existing parking ratios should be reviewed for conformance taking into account local and national experience to see if lower parking ratios are warranted and feasible. Excess parking space construction should be discouraged.

First Recommendation - Roundtable

One of the performance standards of the Chesapeake Bay Preservation Ordinance is to keep impervious cover of a site to a minimum. If established minimum parking lot requirements are exceeded for a land development project, County plan of development review staff can request that the applicant provide additional information to support, justify, or explain why the minimum requirements were exceeded for the intended use.

Discussion:

The Committee recognizes that parking and parking lot designs are of concern to many citizens for a variety of reasons. In relation to other matters, planning staff has been directed to research the concerns and the Committee determined that this research should be conducted outside of this Committee. Further discussions were held over what the current process is regarding the issue of excessive parking.

Recommendation:

The Committee recognizes that staff currently does require written explanations when parking requirements are exceeded and encourages staff to continue the current practice. The site plan submittal checklist has been updated to include an item requesting an explanation for parking beyond the minimums.

Second Recommendation - Roundtable

In cases where there is a need for additional parking beyond the minimum requirements, the use of pervious surfaces should be encouraged.

Discussion:

A porous pavement brochure was developed by JCC staff (Appendix III). This Committee has reviewed the brochure and anticipates that the brochure will assist staff in encouraging the development community to use pervious surfaces.

Recommendation:

The Committee recognizes the environmental benefits of using pervious parking surfaces for overflow parking needs and recommends that staff be directed to encourage the use of pervious parking surfaces where feasible. In addition, the Committee recommends that staff utilize the porous pavement brochure to educate the development community on the subject.

Principle 7 – Parking Codes - Roundtable

Parking codes should be revised to lower parking requirements where mass transit or other transportation modes are available or enforceable shared parking arrangements are made.

First Recommendation - Roundtable

The Roundtable recommends that a model shared parking agreement be available to developers through the Planning Division. The model agreement should include standard language specifying the rights and responsibilities of each landowner; ramifications of future changes in land use and whether more spaces can be added if the land uses change. This document should be submitted and

reviewed by the County during site plan review but can also apply to existing or changing land uses.

Discussion:

A model shared-parking agreement was developed based upon several different models available or in use at the current time.

Recommendation:

Staff has developed a Model Shared Parking Agreement (Appendix IV) and the Committee supports the staff-developed agreement. The agreement is currently available through the County web site.

Principle 8 – Parking Lot Size - Roundtable

Reduce the overall imperviousness associated with parking lots by, minimizing stall dimensions, incorporating efficient parking lanes, and using pervious materials in spill over parking areas.

First Recommendation - Roundtable

The Roundtable endorses this principle and acknowledges that the County already supports this principle by meeting national benchmarks for minimum stall widths of 9' for 90 degree parking; encouraging shared parking, and requiring parking studies when parking lots greatly exceed minimum parking requirements. The Roundtable also recommends lowering the handicapped stall width to meet ADA requirements.

Discussion:

Staff continues to encourage shared parking and pervious parking lot materials where feasible or warranted. Lowering the stall width for handicapped spaces to comply with the Americans with Disabilities Act (ADA) will require an ordinance amendment.

Recommendation:

Staff has prepared the ordinance amendment (Appendix V) and recommends that the Planning Commission and the Board of Supervisors approve the amendment.

Principle 9 – Green Development Certification - Roundtable

Provide meaningful, non-regulatory, incentives to encourage the use of Better Site Design techniques in James City County.

First Recommendation - Roundtable

The Roundtable supports this principle and recommends that County staff involved with the County PRIDE (Protecting Resources in Delicate Environments) water quality education program should consider, investigate and

establish a provision in the program to recognize/award the development and engineering community and applicants who incorporate the principles of better site design into their site development projects (establishment of such a provision in the PRIDE program would be consistent with priority #14 of the approved Powhatan Creek watershed management plan and Priority #10 of the approved Yarmouth Creek watershed management plan).

Discussion:

The PRIDE program intends to award the first development Better Site Design award in calendar year 2007. This award will be on the BOS agenda for recognition.

Recommendation:

The Committee supports the PRIDE program and their on-going efforts to implement a developer recognition award program for Better Site Design.

Principle 10 – Open Space Development - Roundtable

Encourage open space development that incorporates smaller lot sizes, minimizes total imperviousness area, conserves natural areas, provides community open space, reduces total construction costs, protects water quality, and promotes watershed protection.

First Recommendation – Roundtable

The [Roundtable] acknowledges that properly designed open space developments do reduce impervious cover, promote open space, and improve water quality, as compared to conventional development.

Discussion:

Staff will continue to encourage open space development where appropriate to help reduce impervious cover and improve water quality.

Recommendation:

The Committee agrees with the Roundtable and no action is necessary.

Second Recommendation – Roundtable

The use of open space developments should be by-right in R-1 at base density, with adequate ordinance provisions for new development adjacent to existing residential development in order to protect the character of existing conventional development.

Discussion:

The Committee concurs with this Roundtable recommendation; however, the Committee has concerns that the current Cluster Ordinance "as is" does not have adequate provisions to ensure that open space developments will be properly designed or implemented nor does the ordinance contain adequate provisions to protect the character of existing conventional

subdivisions from new development adjacent to existing residential development. In addition, the current Cluster Ordinance predates the most recent Chesapeake Bay Preservation Ordinance amendments as well as the administrative policies for the Yarmouth Creek and Powhatan Creek watershed management plans most recently adopted by the Board of Supervisors.

Possible improvements to the current Cluster Ordinance were identified (discussed in Appendix VI.). However, the Committee concluded that the task of rewriting the Cluster Ordinance to ensure proper open space development design that achieves the objectives of this principle is outside the scope of this Committee and would require additional input and direction from the Planning Commission, the Board of Supervisors, and other interested parties. Therefore, the Committee is forwarding its recommendations for improvements to the current ordinances and procedures to the Planning Commission and Board of Supervisors.

Recommendation:

The Committee recommendations regarding open space development are based on the premise that environmental benefits are derived from this conservation-type form of development that maximizes natural open space preservation, avoids environmentally sensitive areas, and minimizes impervious cover and site disturbance. The Committee's detailed assessment of the current Cluster Ordinance recommendations is contained within Appendix VI. An example of open space design guidelines is provided in Appendix VII and an example of open space development, maintenance, and ownership language from the Code of Hanover County, Virginia is provided in Appendix VIII.

Third Recommendation – Roundtable

The Planning Commission and the Board of Supervisors, with broad-based stakeholder input, should consider if the time requirement and complexity of the existing special use permit (SUP) process:

- 1) Creates a barrier to allowing R-1 and R-2 open space developments with densities above the base density, and*
- 2) Provide adequate incentives to ensure additional environmental protection.*

Discussion:

Through the course of our discussions, this Committee determined that the question of incentives and disincentives or barriers is multifaceted. Prior to finalizing any of the recommendations, more stakeholder input is required to address perceived versus actual barriers and develop an effective incentive program. Because "time is money", the Committee believes that a more predictable and expedient approval process (whether by-right or SUP) would encourage more open space development.

However, other barriers contribute to the reasons that applicants avoid applying open space development techniques and implementing optimum environmental protection measures. For instance, some developers avoid the open space approach because of the financial uncertainty associated with trying something "new". The Committee generally believes the County needs to explore other possible innovative incentives besides "reduced infrastructure costs" and density bonuses.

Recommendation:

The Committee recommends conducting a stakeholder work session to identify disincentives and strategize on effective incentives. The Committee recommends that either the Policy Committee or another specially charged committee should conduct at least one public hearing and a work session during an investigation of possible changes to the Cluster Ordinance to address the suggestion that broad-based stakeholder input is included. The Committee further recommends that one or more members of the Better Site Design Implementation Committee be included in the process. Finally, the Committee recommends that as a component of the process, an educational session for staff, PC, BOS, stakeholders, and members of the public be held with one or more experts on open space design.

Principle 11 – Setbacks, First Recommendation

In cases where open space development is not possible, relax setbacks to achieve greater flexibility of design, minimize driveway lengths for housing, reduce grading areas, minimize land disturbance for construction, and promote the efficient use of land.

First Recommendation – Roundtable

For conventional development, reduce the minimum front setbacks to 25 feet in the R-1 and R-2 residential zones.

Discussion:

The Committee notes that currently, the minimum front setback for structures located in R-2 Zoning Districts is 25 feet.

Recommendation:

Staff developed a memorandum and an ordinance amendment to the R-1 zoning districts to reduce the front setback per the recommendation. The Committee supports the staff-developed ordinance (Appendix IX.).

Principle 12 – Sidewalks - Roundtable

Promote more flexible design standards for residential subdivision sidewalks. Where practical, consider locating sidewalks on only one side of the street and providing common walkways linking pedestrian areas.

First Recommendation - Roundtable

Eliminate the mandatory requirements for sidewalks on both sides of all streets for low density (0-4 du/acres) and moderate density (4-12 du/acre) developments.

Discussion:

James City County Zoning Ordinance does not require sidewalks on two sides of the street. The residential Cluster Ordinance (County Code, Chapter 24, Article VI, Division I) outlines certain items, including sidewalks on both sides of the street, the provision of which allows for specified densities of development.

Recommendation:

The Committee recommends no action on this recommendation given that the Cluster section of the Zoning Ordinance provides for trails and/or sidewalk combinations and there is a mechanism in this section of the ordinance that allows for a waiver or a modification of such requirement. As a result, the Committee determined that the flexibility recommended by the Principle already exists.

Second Recommendation - Roundtable

Where practical, sidewalks shall be sloped such that they drain to a pervious surface to allow runoff to infiltrate.

Discussion:

The Committee discussed several ways to achieve this recommendation, including trying to codify the requirements. In the final analysis, the Committee decided to have the Environmental Division include standards for design in the Low Impact Design section of the COUNTY BMP Guidelines manual. Through discussions with VDOT, consideration of allowing sidewalks to drain to pervious surfaces will be considered on a case-by-case basis, subject to potential liability issues.

Recommendation:

The Committee suggests that the Environmental Division develop a Low Impact Development section to the *James City County Guidelines for Design and Construction of Stormwater Management BMP's* to address guidelines for design, installation, and maintenance of sidewalks, where those sidewalks are intended to be used as credit for LID.

Third Recommendation - Roundtable

Non-monetary incentives should be offered to developers to use alternative pavement materials and promote low impact development. For example, the use of these materials should be able to satisfy stormwater management criteria.

Discussion:

The Committee interpreted the “non-monetary incentives” as a 10-point BMP-type credit that might enable developers to derive credit similar to open space credit. The Committee discussed several non-monetary incentives for the use of sidewalks as LID features. The Committee concluded that incentives, such as stormwater management crediting, are already in place.

Recommendation:

The Committee agrees with the Roundtable and, although having determined that no action is necessary to achieve the recommendation, concludes that additional clarification within the JCC BMP Guidelines would be beneficial. Therefore, the Committee does recommend that a LID section or separate manual be included in the JCC BMP Guidelines manual. This LID section should identify sidewalk design characteristics required to classify the sidewalks as an LID feature suitable for stormwater management credit.

Principle 13 – Driveways and Alternative Surfaces - Roundtable

Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes together.

First Recommendation - Roundtable

Incentives should be available for developments that reduce impervious cover through the use of shared driveways and alternative surfaces.

Discussion:

Possible incentives were discussed by the Committee members. One suggestion was an Environmental Award or some kind of recognition that the developers could use as a marketing tool.

Recommendation:

The Committee recommends that the use of shared driveways and/or alternative surfaces be included as part of the checklist that is used to evaluate projects for the PRIDE award discussed in Principle 9. In addition, the Committee recommends that these items are considered as part of the LID section of the BMP manual so that stormwater credit may be given.

Second Recommendation - Roundtable

A maintenance agreement should be available to developers and should be required to be resigned/re-activated by landowners at time of sale.

Discussion:

It was noted that in the ordinance, shared driveways are only addressed with regards to minor subdivisions. This should be changed to include major subdivisions as well.

Recommendation:

A standard shared maintenance agreement has been developed and will be available on the County website (see Appendix X.). The Committee supports this endeavor.

Principle 14 – Open Space Management - Roundtable

Clearly specify how community open space will be managed and designate a sustainable legal entity, such as a homeowners association, responsible for managing both natural and recreational open space.

First Recommendation – Roundtable

Conduct proactive, annual re-education opportunities geared toward managing and sustaining water quality improvement practices, areas, and facilities.

Discussion:

The Committee determined that the efforts associated with this recommendation correspond with the goals and program elements of the existing PRIDE program.

Recommendation:

The Committee recommends that the PRIDE program take responsibility for the activities associated with this recommendation. The homeowner BSD brochure developed by PRIDE (see Principle 17) and reviewed by this Committee can be used to educate communities (see Appendix XI.).

Second Recommendation - Roundtable

County and developer guidance for homeowners associations (HOAs) should be made more explicit on how to manage conservation areas and should include responsibilities and a checklist of standard management measures and benefits.

Discussion:

Committee discussion for the second and third recommendation focused on how to implement these recommendations and establish standard procedures during the development process (from plan design, approval, implementation, County oversight and inspection during construction, release of bonds, and finally transfer of maintenance responsibility to HOAs) to ensure that land, established as natural open space and conservation areas, is maintained as such during the development process and later by HOAs. The Committee determined that natural open areas and ownership (common area HOA, public conservation easement, or private conservation easement) should be shown on a map/plat. This map

should be referenced in the homeowner by-laws and conveyed to the homeowners association by the developer or the County, when the development is turned over to the HOA. The Committee also determined that characteristics and uses of “natural” open space should be included in the code.

Recommendation:

The Committee recommends that:

1. The County incorporate, into code, a definition for “natural” open space/area that outlines the desirable characteristics, permitted uses, types of ownership, and maintenance associated with “natural” open space.
2. Require applicants to identify “natural common open space” on preliminary and final plats, clearing and grading plans, and landscape plans to ensure that the area is protected and preserved during construction and after completion of development.
3. Either the Planning Department or the Environmental Division should confirm, through each stage of inspection, that the natural open area is protected, revegetated (if necessary), and maintained during construction and at project completion.
4. The PRIDE program should assume the responsibility of developing a checklist and guidance (see Homeowners BSD brochure) which can be provided to HOA. In addition, a final plat should be provided to the HOA. The plat should be referenced in the HOA by-laws in order to ensure that the information is available in future years.
5. HOA associations can be educated through PRIDE and Neighborhood Connections.

Third Recommendation- Roundtable

A portion of open space in new residential developments should be managed in a natural condition. It should be specified how it will be managed (public, private, park, etc.). In higher density zoning districts, open space should consist of a balance between natural areas and passive or active recreation areas.

Discussion:

The open space development technique by Randell Arendt recommends that approximately 50% of open space in a low to moderate density subdivision should be preserved and maintained as natural open space. Definitions for types of open space within the zoning ordinance include “*open space*” and “*landscaped open space, area, strip*.” “Common open space” is a general term defined in the subdivision ordinance, which may include any land or area of water within a development that is held in common with other owners of the development. If the open space is within an RPA or Natural open space easement, then according to the

subdivision ordinance, the applicant is required to note the following on the plat:

“Wetlands and land within resource protection areas shall remain in a natural undisturbed state except for those activities permitted by section 23-7 (c) (1) of the James City County Code.”

and

“Natural open space easements shall remain in a natural undisturbed state except for those activities referenced on the deed of easement.”

If the open space is a landscaped open space or area (as defined in the zoning ordinance), it will be characterized and defined in a Landscape Plan according to the Landscape Section of the Zoning Ordinance. If the open space is a common area, which was not used as “natural open area” to comply with the JCC 10-Point BMP system; then the County does not require the applicant to differentiate between landscaped and natural common areas on the plat.

Recommendation:

See discussion and recommendation for 2nd recommendation. Also, refer to Appendix VIII for an example of the Hanover County, Virginia code regarding open space ownership and maintenance.

Principle 15 – On-site Sewage Disposal Systems - Roundtable

Routine maintenance and repair of on-site sewage systems (OSDS) should be required and enforced. Homeowner education on the regulations and maintenance requirements of on-site sewage disposal systems should occur on a regular basis to promote proper system function.

First Recommendation - Roundtable

JCC should continue to utilize and enforce existing Chesapeake Bay Preservation Ordinance provisions for on-site sewage disposal system maintenance.

Discussion:

Discussion centered on the Chesapeake Bay Ordinance enforcement requirements for septic system pump out. In an effort to enforce the Ordinance in 2000, the Environmental Division sent out letters to everybody on record as having a septic system and identified approximately 600 landowners whose systems were in non-compliance. However, no further action was taken to enforce septic system pump outs. The Environmental Division is now

sending out letters in batches of 50 to 100 and following up with some type of legal action on those who are in non-compliance.

Recommendation:

The Committee agrees with the Roundtable on this principle. However, because compliance with the Ordinance provisions has been mixed, this Committee recommends that the Environmental Division identify alternative means of enforcement for those cases where repeated non-compliance has been demonstrated. For example, the County could implement a pump out maintenance program similar to the grinder pump maintenance program where the owners of septic tanks who have been repeatedly in non-compliance are charged a maintenance fee with the County responsible for the septic tank pump out.

Second Recommendation - Roundtable

The County should consider incentives for promoting the use of alternative systems where conventional on-site sewage treatment practices are typically utilized.

Discussion:

The Committee discussed what possible incentives could be considered. The Committee discussed whether some form of tax incentive could be implemented at the County level.

Recommendation:

The Committee recognized that input from other County departments and/or divisions would need to be sought to pursue this type of incentive and recommended staff follow up with the appropriate parties.

Third Recommendation - Roundtable

If alternative systems are utilized, routine maintenance should be required and enforced.

Discussion:

The Committee discussed what possible incentives could be considered. The Committee discussed whether some form of tax incentive could be implemented at the County level.

Recommendation:

The Committee supports the recommendation of routine maintenance for alternative septic systems and recommends that the Environmental Division develop an enforcement procedure where these types of systems are used.

Principle 16 – Infill and Redevelopment - Roundtable

Redevelopment and infill reduce the demands on areas outside of the Primary Service Area, minimize additional impervious cover, reduce sprawl, and promote environmentally sound techniques that enhance and preserve water quality.

First Recommendation - Roundtable

Encourage environmentally-sound landscaping practices, building, and redevelopment techniques, as applicable.

Discussion:

The Committee agrees with the Roundtable recommendation.

Recommendation:

Staff will continue to encourage engineers and developers to pursue the use of environmentally sound landscaping practices, environmentally sound building practices, and environmentally sound redevelopment techniques as applicable for all infill and redevelopment sites.

Second Recommendation – Roundtable

Promote land redevelopment and infill practices that minimize site disturbance and impervious surfaces.

Discussion:

The Committee agrees with the Roundtable recommendation.

Recommendation:

Staff will continue to promote (among engineers and developers) those infill and redevelopment practices that minimize impervious surfaces and site disturbances to preserve water quality.

Principle 17 – Buffer Systems - Roundtable

Create a naturally vegetated buffer system along all perennial streams that also encompasses critical environmental features such as the 100-year floodplain, steep slopes, and freshwater wetlands.

First Recommendation - Roundtable

Provide homeowners with a brochure at closing, or after closing, that lists plants that homeowners typically prefer in buffers and other areas with comparable preferred alternative plants. The brochure should include photographs and locations where the plants can be purchased.

Discussion:

Discussion centered on how to best compile the information and get it into the hands of new homeowners. The PRIDE program agreed to write and publish a homeowner BSD brochure.

Recommendation:

Committee members have worked with the PRIDE program, Virginia Cooperative Extension Service for James City County/New Kent County, the JCC/Williamsburg Master Gardener Association, and the John Clayton Chapter Virginia Native Plant Society to draft a brochure for homeowners. The brochure includes discussions on the importance of natural open space and natural vegetated buffers around resource protection areas (RPA) and intermittent streams, how to maintain the natural areas, and a recommended native plant list. The Committee recommends that the PRIDE program work with the Real Estate Division, Peninsula Homebuilders Association, Homeowners Associations, and the Master Gardener Association to target the new and existing homeowner audience.

Second Recommendation - Roundtable

Display posters at nurseries and garden centers that have the same information as the brochure discussed in the first recommendation.

Discussion:

This Committee met with Ms. Beth Davis, PRIDE Environmental Education Coordinator, and discussed how PRIDE works with several nurseries and garden centers on citizen education efforts.

Recommendation:

The Committee recommends that the PRIDE program continue on-going efforts to provide citizen education in all forms as suggested in the principle.

Third Recommendation - Roundtable

Educate employees of nurseries and garden centers. However, this may need to be a continuous program since there may be high employee turnover.

Discussion:

At the Committee/PRIDE meeting, Ms. Davis also discussed how PRIDE works with several nurseries and garden centers to address employee education efforts.

Recommendation:

The Committee recommends that the PRIDE program continue on-going efforts to provide citizen education in all forms as suggested in the principle.

Fourth Recommendation - Roundtable

Garden center education avenues should reach “big box” centers (i.e. Lowe’s) as well as “mom and pop” stores.

Discussion:

At the Committee/PRIDE meeting, Ms. Davis discussed how PRIDE works with several big box stores to address citizen education efforts.

Recommendation:

The Committee recommends that the PRIDE program continue on-going efforts to provide citizen education in all forms as suggested in the principle.

Fifth Recommendation – Roundtable

Local native plant society should be further explored as a source of native plants for homeowners.

Discussion:

PRIDE worked with the John Clayton Chapter of the Virginia Native Plant Society (Society) to develop a native plant list that is commercially available. In addition, PRIDE is working with the Society as well as several other nurseries to encourage them to become native plant seed sources.

Recommendation:

The Committee recommends that the PRIDE program continue to work with local nurseries and the John Clayton Chapter of the Virginia Native Plant Society to develop local native seed sources and plant materials for homeowners.

Sixth Recommendation - Roundtable

JCC should use avenues already in place to educate residents, including articles in the Gazette and by expanding the current education program with nurseries to include the “big box” stores.

Discussion:

At the Committee/PRIDE meeting, Ms. Davis also discussed how PRIDE is working with several big box stores and the Virginia Gazette for citizen education efforts.

Recommendation:

The Committee recommends that the PRIDE program continue on-going efforts to provide citizen education in all forms as suggested in the principle.

Seventh Recommendation - Roundtable

JCC should provide information on native plantings for homeowner association newsletters, which are often looking for information to print.

Discussion:

The Committee discussed how to compile a list of natural vegetation for homeowners based on the Virginia Cooperative Extension and commercial lists to ensure availability of native plantings. The PRIDE program should develop a program on native plantings for this specific purpose.

Recommendation:

The Committee recommends that the PRIDE program continue on-going efforts to develop educational pamphlets or programs for native plantings for homeowner association newsletters.

Eighth Recommendation - Roundtable

The County should provide an incentive for the protection of intermittent stream buffers by incorporating them into the County's 10-point system. Points received for protecting intermittent stream buffers as open space should have higher value than general open space protection on a site.

Discussion:

The Committee met with Scott Thomas, COUNTY Environmental Division, to discuss the County's 10-point system and what types of development practices qualify for point credit. The Committee was informed that, although they are not specifically called out, intermittent streams can be used for point credit in the current BMP manual and because of their position within the landscape, they would qualify for 'extra' credit. Committee members recommended that intermittent streams be specifically identified in the BMP manual.

Recommendation:

The Committee recommends that intermittent streams be specifically listed as a type of open space in the BMP manual and recommends that all Committee-proposed BMP manual revisions be addressed at the same time.

Ninth Recommendation – Roundtable

The County and private developers should utilize homeowner associations as an avenue to educate homeowners on the protection of intermittent streams.

Discussion:

Committee discussions regarding homeowner education centered on the optimum method for ensuring that homeowners received appropriate educational materials recommended by the Roundtable. The Committee concluded that one brochure should be developed through the PRIDE program. As discussed previously, members of the Committee worked with PRIDE and other parties to develop this homeowner BSD brochure.

Recommendation:

The Committee recommended that the PRIDE program incorporate language within the homeowner BSD brochure that educates the public on the importance of protecting intermittent streams and stream buffers. The Committee has reviewed the preliminary brochure to ensure that this language is included and concludes that the aforementioned distribution strategy for this brochure will satisfy the objectives of this BSD principle.

Principle 18 – Buffer Maintenance - Roundtable

The riparian stream buffer should be preserved or restored with County-approved vegetation that can be maintained throughout the plan review, delineation, construction, and occupancy stages of development.

First Recommendation – Roundtable

The County should revisit its approved plant list and consult with the College of William and Mary and other stakeholders to update the list.

Discussion:

An approved plant list has been developed through consultation with The College of William and Mary, Virginia Cooperative Extension, and the John Clayton Chapter of the Virginia Native Plant Society. A brochure was developed using this information.

Recommendation:

The Committee recommends that the approved plant list be reviewed and updated periodically to ensure that the list remains relevant.

Second Recommendation - Roundtable

Educate homeowners on the importance of stream buffers, the appropriate plants to use, and the stream buffer regulations.

Discussion:

The Committee agreed to investigate the possibility of a relationship with the Real Estate Division to notify new homeowners through lot-specific conservation education. Furthermore, the different educational brochures created for other recommendations can be used here.

Recommendation:

As stated previously, the Committee recommends that the PRIDE program utilize the homeowner BSD brochure to implement this Roundtable recommendation.

Principle 19 – Clearing and Grading – Roundtable

Clearing and grading of forests and native vegetation at a site should be limited to the minimum amount needed to build lots, allow access, and provide fire protection. A portion of any community open space should be managed as protected green space in a consolidated manner.

First Recommendation – Roundtable

The County does not have erosion and sediment control inspection or enforcement authority for construction associated with public utilities within residential subdivisions and commercial development projects. The County and the Peninsula Housing and Builders Association should jointly petition the State to request that this authority be given the County. This would be restricted to inspection and enforcement of erosion and sediment control practices for utility construction within individual residential subdivision and commercial development projects.

Discussion:

The Committee discussed polling the development community, having PHBA draft a letter to the State in cooperation with the County, and contacting the utilities directly in order to gain enforcement authority for the County over utility maintenance and installation. Mr. Robert Duckett, Director of Public Affairs, PHBA, wrote a letter to the Department of Conservation and Recreation asking that erosion and sediment control inspection and enforcement be granted to James City County (see Appendix XIV for letter and response).

Recommendation:

The Committee strongly urges PHBA to keep the pressure on the State either to enforce the regulations at the State level or to permit willing localities the authority to enforce the regulations themselves.

Principle 20 – Tree Conservation – Roundtable

Conserve trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native plants. Where practical, manage community open spaces, street rights-of-way, parking lot islands, and other landscaped areas to promote natural vegetation.

First Recommendation – Roundtable

A conceptual site plan review meeting may provide a forum for identifying tree conservation and open space preservation opportunities on development sites. This Roundtable supports the continued use of the voluntary conceptual plan review process for all developments.

Discussion:

Two Committee members recently attended a Sustainable Building Practices seminar. All three keynote speakers at the seminar, including an environmental engineer, an environmental consultant from WEG, and open space development designee Randall Arendt recommended that developers conduct the site analysis prior to developing a conceptual plan. The site-specific data should then be used to guide the conceptual plan development and review.

This approach was discussed with all Committee members and with Environmental staff. All concurred that this approach has a number of benefits including: reduced plan review and approval time; increased environmental sensitivity of development; more effective stormwater management systems; and advice to and guidance for applicants early in the design process (prior to engineering expenditures associated with the preliminary plat/site plan design).

Recommendation:

The Committee agrees with the Roundtable recommendation. Staff will continue to encourage engineers and developers to pursue the use of the conceptual site plan review process. In addition, the Committee recommends that the conceptual site plan review process include a detailed site analysis that includes RPAs and other primary and secondary conservation features (see Appendix VII for a list of potential conservation features).

Principle 21 – Conservation Incentives - Roundtable

Incentives and flexibility such as, but not limited to, density compensations, buffer averaging, property tax reduction, stormwater credits, and by-right open space development should be considered to promote the conservation of stream buffers,

forests, meadows, rare species, or unique habitat, and other areas of environmental value over and above current regulations. Additional off-site mitigation consistent with locally adopted watershed management plans should be considered where on-site credit is not possible.

First Recommendation - Roundtable

Expand the list of open space options that may receive points under the 10-point system. In particular, the County should assign higher point values to priority conservation areas identified in the County's watershed management plans, to buffers that are preserved along intermittent streams, and in consultation with the Department of Conservation and Recreation Division of Natural Heritage, to areas that provide habitat to rare or threatened species.

Discussion:

The types of open space discussed in this recommendation already are assigned extra point values with the current 10-point system and may receive extra point value based upon the landscape position of the open space. The Committee reviewed the open space section of the current BMP manual and determined that some clarification or specification of these types of open spaces is warranted.

Recommendation:

The Committee recommends that the Environmental Division consider reconvening the Stormwater Task Group to address BMP manual revisions. Furthermore, the Committee recommends that the BMP manual revisions specifically include the types and characteristics of open space that can receive points under the 10-point system.

Second Recommendation – Roundtable

With broad-based stakeholder input, the Planning Commission should examine possible incentives and means of flexibility and make recommendations to the Board of Supervisors.

Discussion:

The Committee concurs with this recommendation and feels that this issue is somewhat related to the third recommendation for Principle 10 “Open Space Development”. In addition, the Committee concluded that this issue should be addressed during the BMP manual revision process.

Recommendation:

The Committee recommends that the Planning Commission address this issue during the work session recommended for

Principle 10. The results of the work session should be considered by the Environmental Division during the BMP manual revision process. The Committee also recommends that the Environmental Division consider design and management criteria.

Principle 22 – Stormwater Management – Roundtable

Stormwater runoff from new development should be treated per the James City County Chesapeake Bay Preservation Ordinance and the Erosion and Sediment Control Ordinance.

First Recommendation - Roundtable

The Roundtable supports this principle and acknowledges that there are no impediments to its implementation in James City County ordinances and regulations.

Discussion:

Environmental Division staff will continue to pursue stormwater compliance on all development projects, per current ordinances and approved stormwater management plans.

Recommendation:

The Committee agrees with the Roundtable recommendation: there are no impediments for stormwater compliance through the implementation of current ordinances and regulations.

Principle 23 – Parking Lot Runoff - Roundtable

Wherever possible, provide stormwater treatment for parking lot runoff using bioretention areas, filter strips, and/or other practices that can be integrated into required landscaping areas and traffic islands.

First Recommendation - Roundtable

The County should adopt a formal program that defines acceptable low impact development practices and provide credits for their use.

Discussion:

The Committee reviewed a New Kent County LID manual and determined that the County should develop a similar LID section in the BMP manual.

Recommendation:

The Committee agrees with the Roundtable recommendation and encourages the Environmental Division to incorporate a LID section into the BMP manual during the revision process.

Second Recommendation - Roundtable

The County should encourage the use of pervious surfaces (i.e. turf) in overflow parking areas.

Discussion:

Staff will continue to encourage pervious surfaces in overflow parking areas where appropriate to help reduce overall development site imperviousness at all opportunities.

Recommendation:

The Committee agrees with the Roundtable recommendation. Staff will encourage applicants, as appropriate, as development plans come forward. Staff will also provide applicants with the porous pavement brochure (see Appendix III) as appropriate.

Principle 24 – Rooftop Runoff - Roundtable

Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas and avoid routing rooftop runoff to the roadway and the stormwater conveyance system.

First Recommendation - Roundtable

Investigate allowing extra stormwater management points to be earned through careful management of rooftop runoff.

Discussion:

The Committee discussed addressing this recommendation through modifications to the BMP manual.

Recommendation:

The Committee recommends that the Environmental Division address incorporation of rooftop runoff management into the BMP point system during the BMP manual revision process.

Second Recommendation – Roundtable

JCC should provide credit within the stormwater management points system for the reuse of stormwater for irrigation.

Discussion:

The Committee discussed addressing this recommendation through modifications to the BMP manual.

Recommendation:

The Committee recommends that the Environmental Division address inclusion of “reuse of stormwater for irrigation” into the BMP point system during the BMP manual revision process.

Summary

The table at the beginning of this document summarizes work that has already occurred, as well as specifying the recommended responsible party and action for the remaining items. Overall, the major remaining items include:

- Development of a Better Site Design (BSD) checklist
- Incorporate BMP manual revisions for Low Impact Development (LID) principles and BSD elements
- Consideration of ordinance changes (Cluster Ordinance) and policy development regarding street widths
- Development and/or continuation of a variety of educational materials

Additional Opportunities

The preparation and publication of the BSD document entitled *Recommended Model Development Principles for James City County, Virginia* represents progress in identifying areas in which the County can enact and encourage change in standard development techniques to:

1. reduce overall site impervious cover;
2. preserve and enhance existing natural areas;
3. integrate stormwater management; and
4. retain a marketable product.

The final goal of implementing these BSD techniques is to protect County wetlands, surface waters, and the Chesapeake Bay. BSD techniques are only effective if applied and a key component in implementation of these principles is education of all interested parties: staff, legislators, the development community, county citizens, local businesses, etc. The BSD publication has been available, through the County website, for a number of years and many of the BSD principles can be applied now. Lately, through the encouragement of some staff and legislators, some of BSD features have been proposed for several future developments. However, members of this Committee have noted that knowledge of BSD principles and techniques varies among County staff, legislators, and planners/engineers within the development community. This inconsistency and lack of knowledge and training is a major hurdle in implementing the BSD principles. Opportunities are lost during the design review process if staff or legislators do not request inclusion of BSD features in a development plan.

As a result, the Committee strongly recommends that the County conduct a one-day, internal BSD training seminar to educate staff, Planning Commissioners, and the Board of Supervisors. This internal seminar should train attendees on the benefits of BSD; how

to encourage applicants, early in the design and approval process, to apply BSD techniques; and how to respond to typical misconceptions associated with BSD techniques.